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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/655,859

09/05/2003

John A. Barton

2003-IP-010400 UI USA

7274

7590

08/28/2006

Albert C. Metrailler

Conley Rose

5700 Granite Parkway, Suite 330

Plano, TX 75024-6616

EXAMINER

CHAMBERS, TROY

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/655,859

Applicant(s)

BARTON ET AL.

Examiner

Troy Chambers

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 29 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

### DETAILED ACTION

1. The Applicant has requested an interview if the Examiner believes wording changes is needed for allowance. However, the Examiner does not have any suggestions at this point that would put the case in condition for allowance.

Additionally, the proper method for requesting an interview is the submission of form PTO-413A. This form will give the Examiner early notification that an interview is requested.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-6 and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4998477 issued to Barker.

2. With respect to claim 1, Barker discloses a detonator system for detonating cord.

The system includes:

- |      |                                  |                   |
|------|----------------------------------|-------------------|
| a.   | a firing head                    | 14                |
| i.   | a chamber to receive a detonator | 15                |
| ii.  | an upper sealing surface         | Fig. 1, left end  |
| iii. | a lower sealing surface          | Fig. 1, right end |
| iv.  | upper sealing surface o-rings    | 13                |
| b.   | a booster charge holder          | 21                |

- |     |                       |                   |
|-----|-----------------------|-------------------|
| v.  | upper sealing surface | Fig. 2, right end |
| vi. | bulkhead              | 25                |

The booster charge holder upper surface and bulkhead are adapted to form a fluid and pressure seal because they are designed to cooperate with o-rings 13 at an upper end and a retainer 17, the retainer designed to cooperate with a boot designed to seal against fluid and pressure intrusion.

The Examiner interprets the phrase “adapted for forming a fluid and pressure seal” as not actually requiring the components to form a seal but merely assist in the ability to do so. In the applicant’s device, neither the firing head nor booster charge holder is capable of forming a seal. The only members capable of sealing are the o-rings 32. Barker provides a similar arrangement in which the various components are nestled together so that the boot 18 can slide over there over and perform a sealing function.

3. With respect to claim 2, Barker discloses a detonator chamber as discussed above and o-rings 13.

4. With respect to claim 3, Barker discloses a pressure and fluid resistant seal boot 18 having an inner surface and outer surface and a first end (left end) and a second end (right end). Both surfaces form an enclosure in which the firing head is received. As a result, an inner surface of the booster charge chamber and booster charge is sealed against fluid intrusion.

5. With respect to claim 4, the boot 18 forms a seal with chord 19 as shown in Figs. 1 and 2.

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6. With respect to claim 5, the right end (2<sup>nd</sup> end) has a diameter smaller than the left end (1<sup>st</sup> end).
7. With respect to claims 8 and 9, refer to Fig. 2.
8. With respect to claim 10, Barker discloses a detonator 15 and wire line sub 11.
9. With respect to claim 11, refer to Fig. 2 which shows the various components such as the booster charge holder 21 and firing head 14 and boot 18 nestled together to form a sealing engagement.
10. With respect to claim 12, Barker discloses a booster charge 20.

With respect to claim 13, Barker discloses cord 19.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-4 and 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3244103 issued to Spickard. Spickard discloses a detonator system, comprising:

- c. a firing head top end of Fig. 1;
- d. a seal member 23;
- e. a booster charge holder fluid tight holder 41;
- f. a second seal member seal boot 46;
- g. bulkhead 12;
- h. detonating cord (not shown but inserted at 42);
- i. electrical detonator 16;
- j. wire line sub Fig. 2.

12. Claims 1-5, 8-16 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5123356 issued to Brooks et al. (hereinafter "Brooks"). Brooks a detonator system as shown in Fig. 4, comprising:

- |    |                       |               |
|----|-----------------------|---------------|
| k. | a firing head         | at housing 42 |
| l. | seal members          | 44;           |
| m. | booster charge holder | 40;           |
| n. | second seal member    | seal boot 52; |
| o. | detonating cord       | 50;           |
| p. | electrical detonator  | 46;           |
| q. | wire line sub         | 48            |

***Response to Arguments***

13. Applicant's arguments filed 06/19/2006 have been fully considered but they are not persuasive. With respect to claim 1 the applicant argues, "The boot is not positioned to form a seal between sealing surfaces of the Barker detonator chamber 15 and the booster charge holder 21." However, upon closer inspection of the language of claim 1 the Examiner has concluded that the seal member position is not required to be between the booster charge holder upper sealing surface and the firing head lower sealing surface. Rather, claim language merely requires that the positioning of the seal member result in a seal between said surfaces of said charge holder and said firing head. The seals 13 and boot 18 of Barker accomplishes both of these functions

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because they are “positioned” to form a sealed environment throughout the interior of the detonator system.

14. The applicant provides a similar argument for the patentability of claim 3; however, the Examiner’s response above is equally applicable.

***Allowable Subject Matter***

15. Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

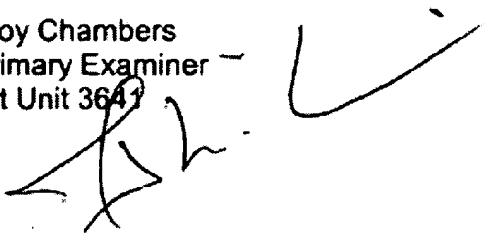
16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (571) 272-6874 between the hours of 7:00 a.m. to 3:30 p.m., M-F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (571) 272-6873.

Troy Chambers  
Primary Examiner  
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A handwritten signature in black ink, appearing to be 'T. Chambers', is written over the printed name and title. To the right of the signature is a large, stylized checkmark or 'L' shape.

TC  
20 August 2006